

Nevada's Solid Waste Management Plan



Nevada Division of Environmental Protection

Introduction

⇒ Objectives in Updating the State Plan

- Comply with NRS 444.570 that mandates a State solid waste plan and periodic updates
- Assess current conditions and trends
- Identify issues and suggest strategies, such as legislative or regulatory changes to address key issues



Government Roles and Responsibilities

➔ Municipal Governments

- Develop a plan to provide a solid waste management system to manage and dispose of all solid waste within the municipality.

➔ Health Districts

- Solid Waste Management Authorities in Clark and Washoe Counties

➔ State Government

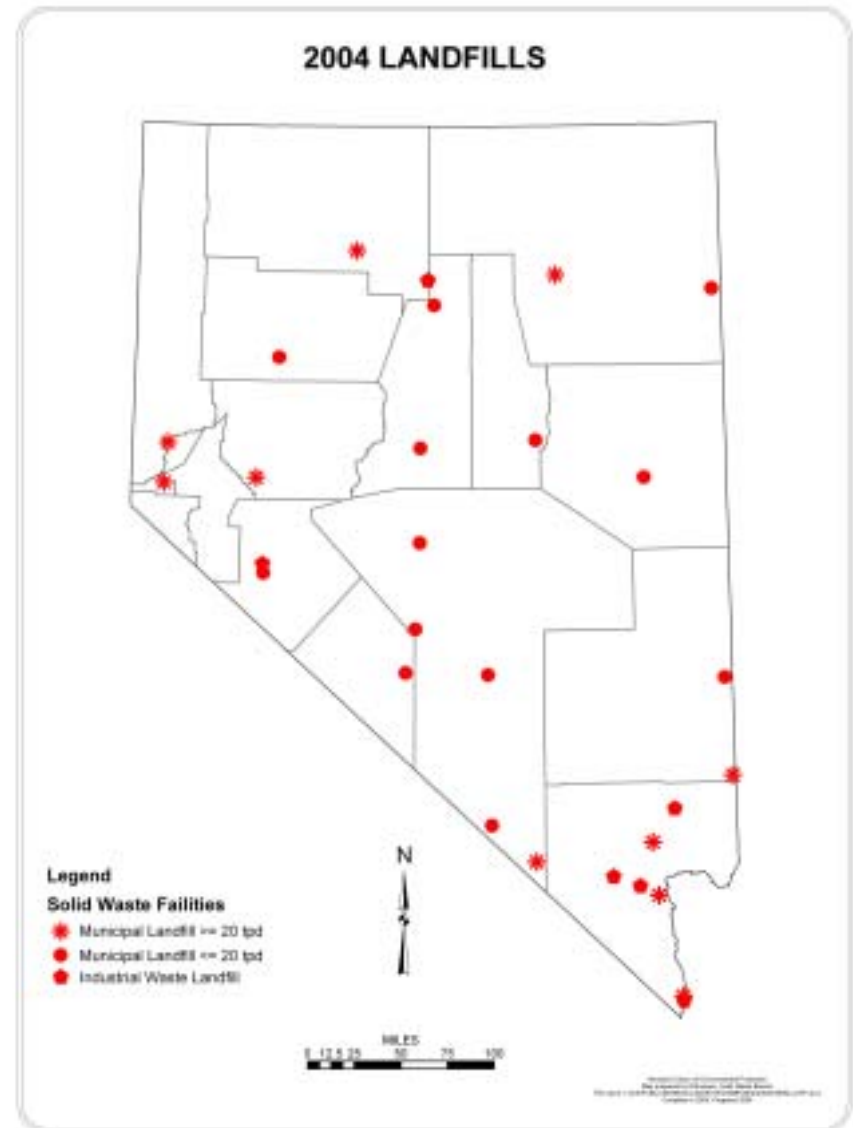
- Solid Waste Management Authority in remaining Counties
- Approved to administer federal municipal landfill regulations
- Statewide planning, review of Health District solid waste programs, enforcement of recycling requirements, public information and education

➔ Tribal Government

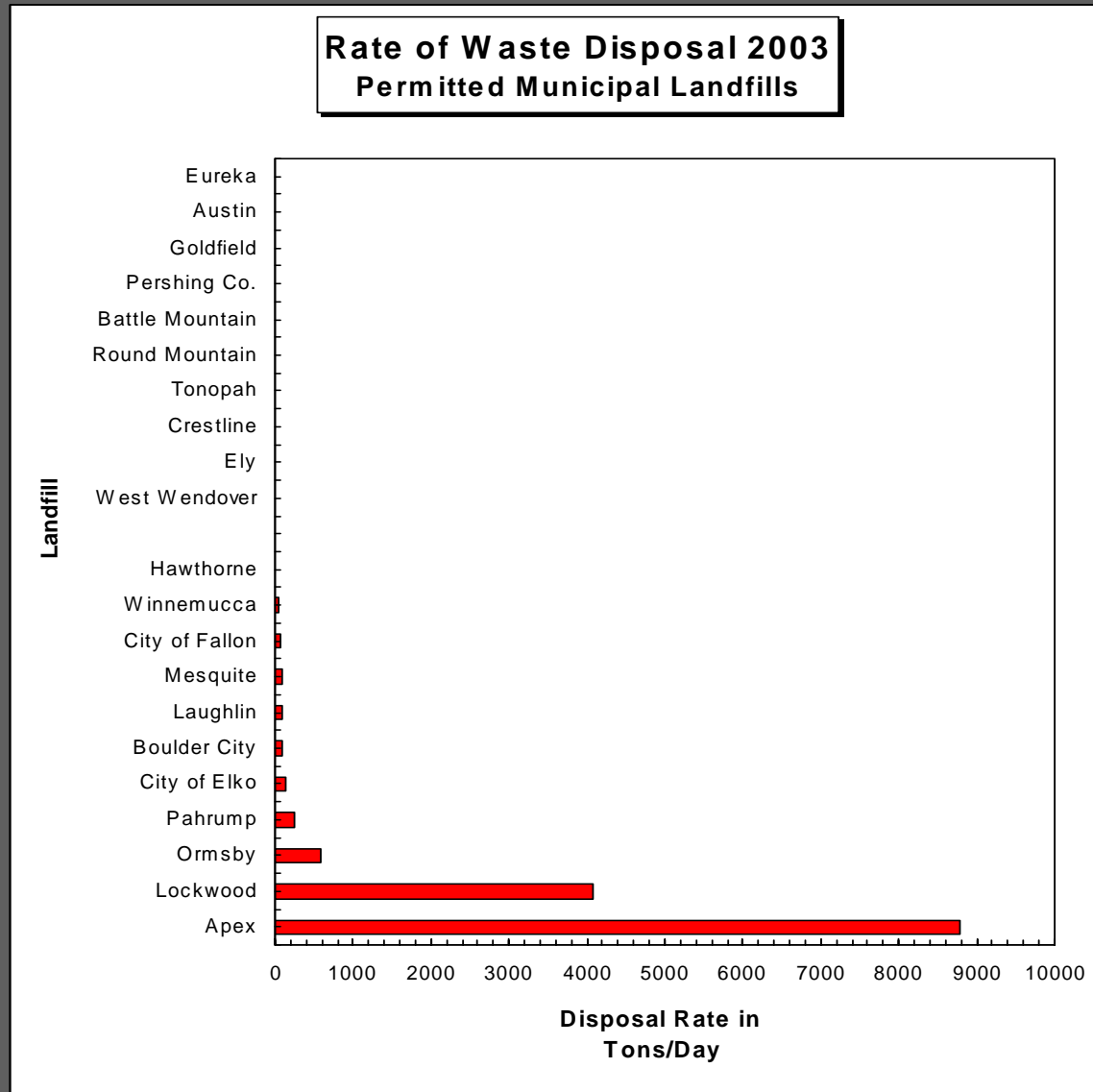
- Regulated by EPA, Region IX



Solid waste trends...



Solid waste trends...



Collection and infrastructure

- ⇒ Curbside garbage collection offered in most areas
- ⇒ Bi-weekly collection of recyclables at single-family homes in Carson City, Clark, and Washoe
- ⇒ Network of transfer stations and rural public waste bins
- ⇒ Residential collection service cost:
 - \$11 - \$12 in Carson City, Clark and Washoe
 - \$5 - \$19 in rural counties



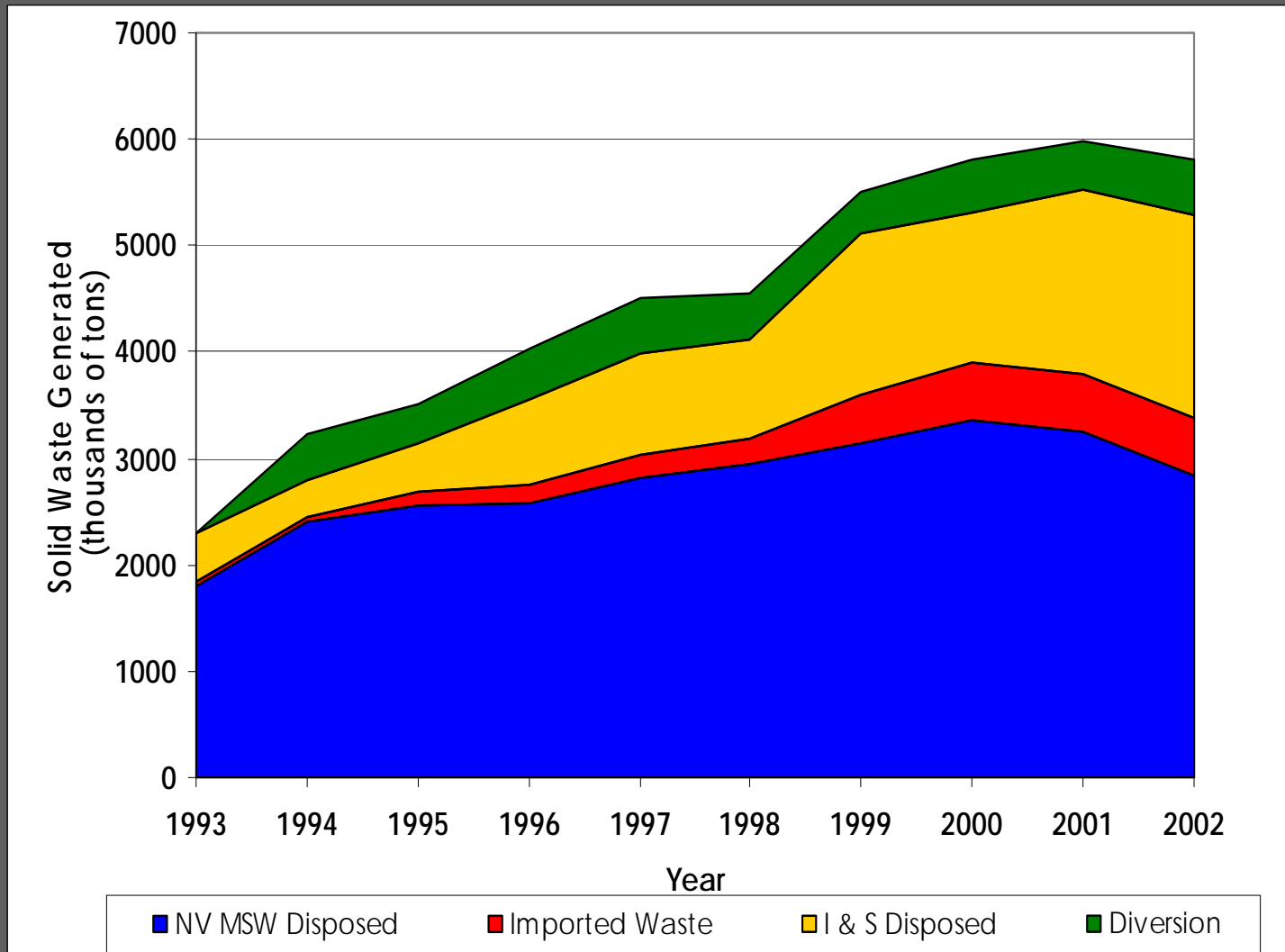
Landfill capacity... not an issue for Nevada as a whole

⇒ Estimated years remaining life for large landfills

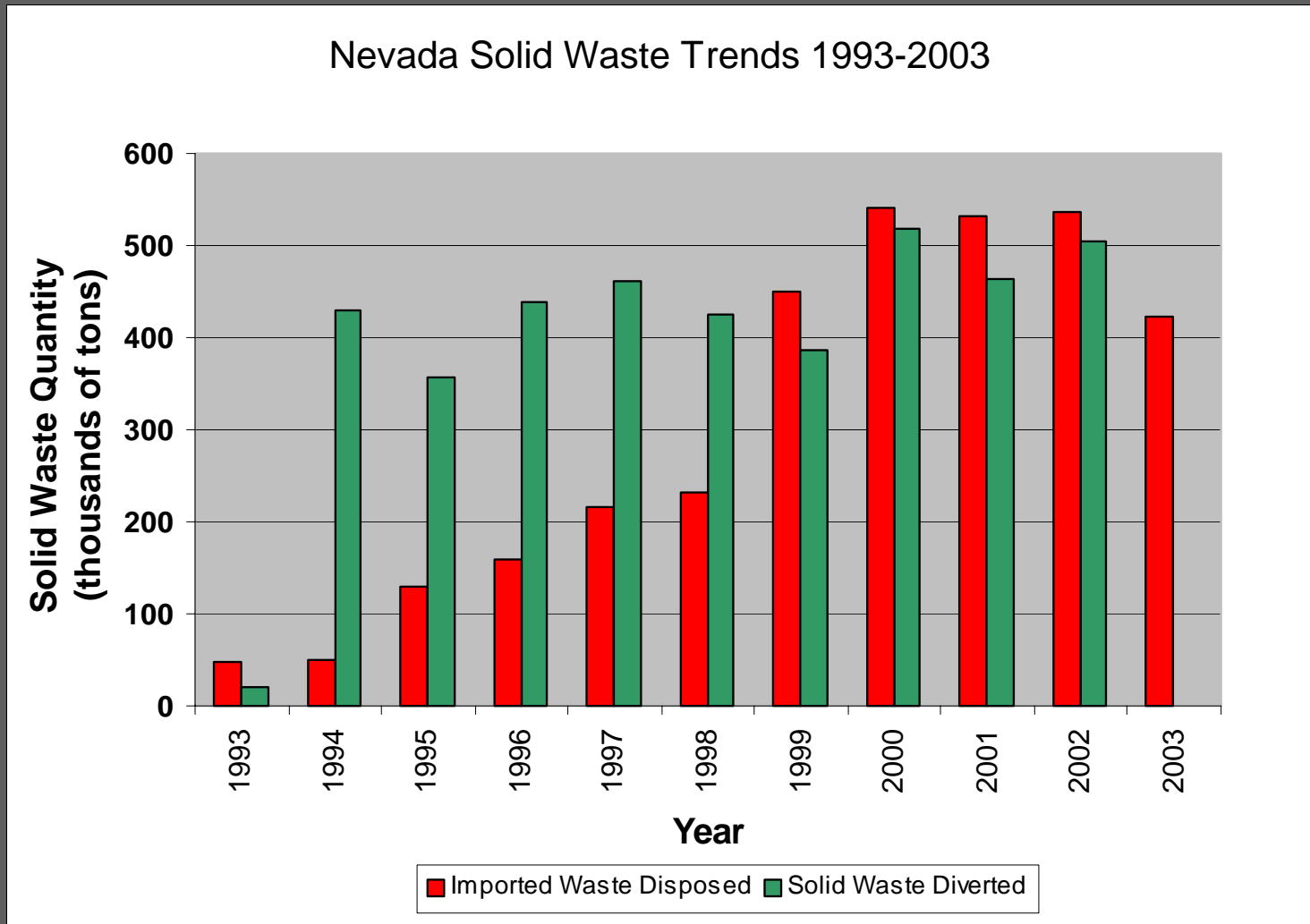
- Apex – 44
- Boulder City – 33
- Carson City – 13
- Elko – 19
- Laughlin – 16
- Lockwood – 32
- Pahrump - 5



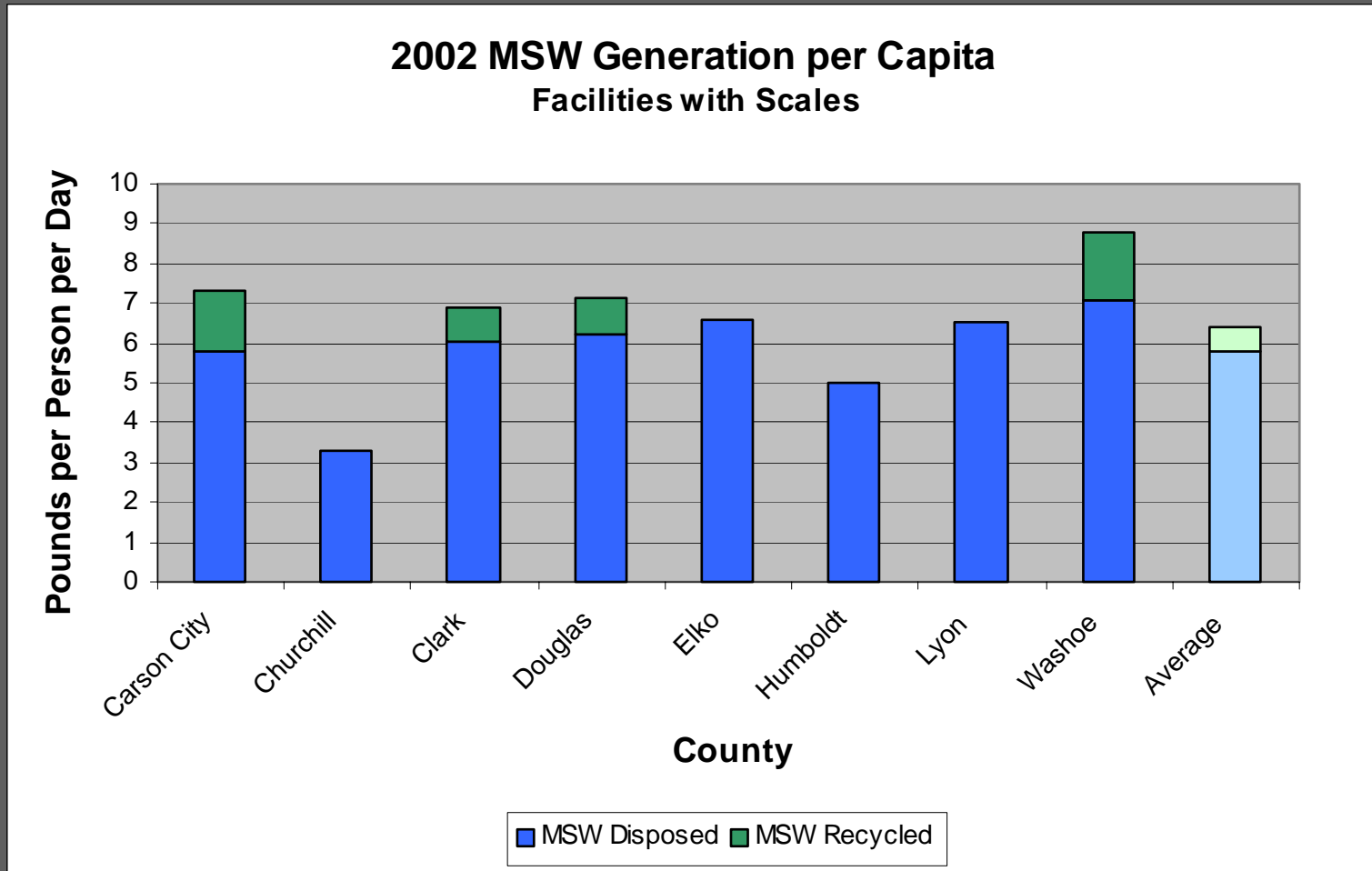
Waste generation and recycling



Solid waste trends...comparison of imported vs. recycled amounts



Generation and diversion



Assessment of Municipal Solid Waste Management Systems

⇒ Map and atlas for each County

- Map shows infrastructure for year 2004
- Atlas provides information on:
 - Local solid waste planning authority
 - Population and solid waste trends (1993 – 2003)
 - Active municipal waste landfills
 - Solid waste and recyclables collection services
 - Recycling drop-off sites
 - Household hazardous waste collection services



Map and Atlas for Clark County

State Solid Waste Management Plan



Clark County

Solid Waste Profile

LOCAL SOLID WASTE PLANNING:

Responsible Agency: Clark County Health District

Plan Date: April 27, 1995

POPULATION AND SOLID WASTE TRENDS:

	1993	1995	1997	1999	2001	2003
Population	916,877	1,059,435	1,195,386	1,327,145	1,485,855	1,629,748
Municipal waste generated	1,227,790	1,869,885	2,047,323	2,327,935	2,366,737	2,825,963
Industrial/special waste disposed	215,808	140,890	529,532	984,586	1,192,064	1,648,517
Imported waste disposed	0	0	0	0	0	0
Recycling rate	N/A	12%	19%	37%	35%	N/A
MSW generated/capita (lbs./day)	7.34	9.70	9.40	9.61	8.69	6.85

Notes: Data in rows as reported to RCAP; recycling rate = ARW recycled / ARW generated; population from NV State Demographer

ACTIVE MUNICIPAL SOLID WASTE LANDFILLS:

Site Name	Owner/Operator	Landfill Estimated Class	Tons/Day (2001)	Closure
Apex Landfill	Republic Services	I, II	8779	2147
Boulder City Landfill	US BLM/ Boulder City Disposal	I	99	2006
Laughlin Landfill	US BLM/ Republic Services	I	94	2009
Wells Cargo	Wells Cargo	III	1025	N/A

SOLID WASTE/RECYCLABLES COLLECTION SERVICES:

Municipality	Handler	Exclusive Franchise	Mandatory Collection	Collection Frequency	Curbside Recycling
Clark County	Republic Services	Yes	Yes	semi-weekly	bi-weekly
Las Vegas	Republic Services	Yes	Yes	semi-weekly	bi-weekly
North Las Vegas	Republic Services	Yes	Yes	semi-weekly	bi-weekly
Henderson	Republic Services	Yes	Yes	semi-weekly	bi-weekly
Boulder City	Boulder City Disposal	Yes	Yes	weekly	bi-weekly
Laughlin	Republic Services	Yes	Yes	semi-weekly	bi-weekly
Mesquite	Virgin Valley Disposal	Yes	Yes	weekly	none

NUMBER OF RESIDENTIAL RECYCLING DROP-OFF SITES for:

Office Paper	Card-board	News-paper	Al/Tin Cans	Plastics	Yard Waste	Used Oil	Sites that accept 3 or more different types of materials
8	19	8	10	2	2	0	7

HOUSEHOLD HAZARDOUS WASTE COLLECTION SERVICES:

Owner/Operator	Type of Service	Materials Accepted
Republic Services	Drop-off Tues-Sat at recycle center Quarterly events at 3 transfer stations in Henderson, Laughlin & Stirling	Used Oil, Paint, Pesticides, etc.
Boulder City	Drop-off Mon-Sat at landfill	

Solid Waste Management Issues and Strategies

⇒ An objective of the plan is to identify current and future issues and suggest strategies to address them.

- Landfills
- Recycling
- Importation
- Special Waste Management
- Rural Waste Management
- Open dumping and open burning
- State and local funding



Landfills

⇒ Issues

- Liner requirements for large scale landfills
 - Proposed large-scale landfills without liners raise concern about containment of landfill leachate and gas.
- Bioreactor landfills (R&D permit)
 - Do they make sense in Nevada?
- Postclosure care period
 - Is 30-years long enough?
- Final cover
 - Is the conventional clay cover acceptable? How to promote alternative designs?
- Landfill gas
 - Landfill gas management may deserve more attention in the design, operation and closure of NV landfills.



Landfills

⇒ Suggested strategies

■ Liner requirements

- Consider a threshold above which an engineered liner will be required.

■ Bioreactor landfills (RD&D permit)

- Do not seek authority to issue RD&D permits unless needed.

■ Postclosure care period

- Consider requiring postclosure care as long as the buried waste remains a potential source of groundwater contamination.

■ Final cover

- Develop guidance or regs to promote the use of alternative final covers.

■ Landfill gas

- Evaluate the conditions of gas generation at Nevada landfills.



Recycling

⇒ Issues

- Nevada has failed to meet it's 25% goal
- Clark County low recycle rate profoundly impacts the statewide rate
- Barriers to recycling in Clark County
 - County does not have a recycling coordinator
 - Limited recycling opportunities at apartments
 - No coordinated effort in the commercial sector
- Public buildings present opportunities to increase recycling



Recycling

⇒ Suggested strategies

- Improve information available to businesses on waste reduction and local recycling by adding provisions to the duties of counties with recycling programs
- Improve recycling coordination and public information by establishing a recycling coordinator at the local level
- Establish an NDEP recycling coordinator position in Las Vegas
- Coordinate with local government and franchisee in Clark County to promote expansion of recycling opportunities
- Investigate the benefits and feasibility of a State “bottle bill”



Importation

⇒ Issues

- NV positioned to become major waste importing state
- The solid waste management account is funded entirely by Nevada residents and businesses through the tire fee - States that export waste to Nevada do not contribute to the cost of regulation.

⇒ Suggested strategy

- Establish permit fee & composite liner requirements for disposal sites that exceed a disposal rate or capacity threshold.



Special Waste

⇒ Issues

- Waste tires – tire recycling markets have not developed in Nevada, therefore, most tires are landfilled
- HHW – drop-off service is provided in communities >40,000 however, rural Nevada does not have comprehensive HHW programs.
- Infectious waste – services for home-generated medical waste, such as “sharps,” are not prevalent.
- Electronic waste – some fail the toxicity test and require special management. The electronic waste issue is not unique to Nevada.



Special Waste

⇒ Suggested strategies

- Re-evaluate tire landfilling and investigate the potential for tire-derived fuel and recycling markets.
- Provide HHW startup funding to rural local governments that are willing to cover program maintenance.
- Promote development of collection programs for sharps. Provide information on mail-in programs.
- Municipalities should inform local electronic waste generators of the available recycling and disposal options



Rural Waste, open dumping and open burning

⇒ Issues

- Rural waste –Demands for increased rural waste infrastructure and technical operations and planning place an economic burden on the County.
- Open dumping – Remains a problem in many areas of Nevada
- Open burning – Is not only a public nuisance, but is also a threat to public health and the environment due to the emission of persistent bioaccumulative toxins (PBT) toxic substances (e.g. dioxins)



Rural Waste, open dumping and open burning

⇒ Suggested strategies

- Establish a state landfill manager/operator certification program.
- Establish a grants program to help rural governments to improve their solid waste management system.
- Assist rural government officials and staff that want to address illegal dumping.
- Some local governments should consider adoption of a “generator responsibility” ordinance.



State and local funding

⇒ Issues

- In some counties, budget shortages have led to failure to provide adequate staff, training, equipment and operation funds.
- Funding solid waste management regulation is provided primarily through the \$1 fee per tire in Nevada.
- NDEP receives 44.5% of the tire fee, with Clark and Washoe County health districts receiving the remainder.
- The revenue trend from the tire fee has decreased from \$0.32/ton disposed in 1994 to \$0.21/ton disposed in 2003 (adjusted for inflation).



State and local funding

⇒ Suggested strategies

- Evaluate funding sources and the need for financial assistance to rural local governments.
- Seek statutory revisions to allow NDEP to award grants to rural local governments for improvement of the local solid waste management system
- Establish permit fees for disposal sites that exceed a permitted disposal rate or capacity threshold.
- Investigate the benefits and feasibility of adoption of a State "bottle bill".



State solid waste plan...next steps

- ⇒ August 27, 2004 – public comment period ended
 - Accepted written and email comments on draft plan.
- ⇒ Sept to Dec 2004 – prepare and post final draft
 - Petition State Environmental Commission to adopt plan
 - 30-day public comment period on final draft



Conclusion

- ⇒ Keep state and municipal solid waste plans up to date!
- ⇒ Check NDEP website for updates on Nevada SWMP development: *www.ndep.nv.gov*
- ⇒ Submit written comments on State SWMP to:

Les Gould, Supervisor, Solid Waste Branch
Bureau of Waste Management
Nevada Division of Environmental Protection
333 W. Nye Lane, Rm 138
Carson City, NV 89706-0851

or email/phone:

Les Gould.....lgould@ndep.nv.gov.....775-687-9468

Dave Simpson....dsimpson@ndep.nv.gov....775-687-9469

